

I CLAIM:

1 *Sub A1* 1. A method for operating a system by voice command, comprising:  
2 providing a mobile unit having a microphone, a digital signal  
3 processor and a radio module for providing wireless data communications to a computer;  
4 receiving first voice commands having a limited vocabulary in said  
5 mobile unit, recognizing said first voice commands in said digital signal processor and  
6 controlling said mobile unit in response to said first voice commands;  
7 receiving second voice commands in said mobile unit, converting  
8 said second voice commands to digital data signals in said mobile unit and sending said  
9 digital data signals to said computer using said radio module; and  
10 operating said computer to recognize said second voice commands  
11 using a large vocabulary voice recognition program to derive computer control signals  
12 therefrom.

1 2. A method as specified in claim 1 wherein said controlling said  
2 mobile unit in response to said first voice commands comprises controlling said mobile  
3 unit to communicate with said computer.

1 3. A method as specified in claim 1 further including operating said  
2 computer in response to said computer control signals.

1 4. A method as specified in claim 3 wherein said mobile unit further  
2 includes a speaker, and wherein said operating said computer comprises retrieving data  
3 from a memory of said computer, converting said retrieved data into voice data, sending  
4 said voice data to said mobile unit, and converting said voice data to analog signals to be  
5 supplied to said speaker.

1 5. A method as specified in claim 1 wherein said mobile unit is  
2 provided with a speaker, and wherein said computer control signals are arranged to  
3 establish a voice communications channel between said mobile unit and at least one other  
4 voice communicating device, and wherein said computer is operated to establish said  
5 voice communications channel to transfer voice communication data between said mobile  
6 unit and said other voice communications device.

1 Sub A17 6. A method as specified in claim 5 wherein establishing said voice  
2 communications channel includes converting said voice communications data between  
3 digital and analog form.

1 7. A mobile device, comprising:  
2 a microphone for receiving sound signals;  
3 an interface, connected to said microphone for converting received  
4 sound signals from said microphone to data signals;

5 a radio module for sending wireless data communication signals;

6 and

7 a digital signal processor, said processor including a program for

8 (1) recognizing a limited number of digital data signals from said interface and operating

9 in response thereto to control said radio, (2) operating said radio module to send digital

10 data signals, and (3) providing digital data signals corresponding to sounds from said

11 microphone as data packets to said radio module.

1 8. A mobile device as specified in claim 7 wherein said digital

2 processor is further programmed to compress said digital data signals corresponding to

3 sounds.

1 9. A mobile device as specified in claim 7 further comprising a

2 speaker, wherein said interface is further arranged for converting digital data signals into

3 sound signals and providing said sound signals to said speaker, and wherein said digital

4 signal processor is further programmed to provide digital data signals received by said

5 radio to said interface for conversion to sound signals.

1 10. A mobile device as specified in claim 9 wherein said digital

2 processor is further programmed to compress said digital data signals from said interface

3 and to decompress digital data signals received by said radio.

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1 11. A mobile device as specified in claim 10 wherein said digital  
2 processor controls said interface to have a first sampling rate for voice signals data  
3 corresponding to commands and to have a second sampling rate for voice signals  
4 corresponding to voice communications.

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1 12. A mobile device as specified in claim 9 wherein said digital  
2 processor is interfaced to a host processor for transferring data signals to be sent or  
3 received using said radio module.

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1 13. A mobile device as specified in claim 9 wherein said digital  
2 processor is interfaced to a bar code scanner for receiving bar code signals from said  
3 scanner, and wherein said digital processor is further programmed to convert said bar  
4 code signals to digital data signals.

1 14. A mobile device as specified in claim 9 wherein said digital  
2 processor is programmed to receive data signals from said interface and to alternately  
3 supply said data signals to first and second buffer memories during alternating first and  
4 second time intervals by direct memory access, and wherein said processor is  
5 programmed to process data in one of said data buffers while said data signals are  
6 supplied to the other of said data buffers.

- Sub A17*
- 1 15. A mobile device as specified in claim 14 wherein said processor is
- 2 programmed to process said data using a compression algorithm.
- Add A17*

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